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ABSTRACT

The "Questionnaire on Student and College Characteristics" (QSCC), designed to provide information about colleges that would be of interest to prospective students, was administered to upperclass students at over 200 institutions. This study provides a better understanding of relationships among the 135 items, identifies dimensions that differentiate among four-year institutions, and compares methods of assessing college environments. A factor analysis of the 77 perceptual items in the QSCC is presented and discussed; student perception and student self-report data from the QSCC are combined with published, objective information about each institution in order to further investigate differences among college environments. A total of 53 institutional characteristics were factor analyzed, resulting in six factors: Athletic vs. Cultural, Size with Cliquishness, Elitism, Activism with Flexibility, Student Satisfaction, and Social Life. Finally, the three methods of assessing the college environment--student perceptions, student self-reports, and objective institutional data--are compared by use of multimethod factor analysis, a new technique which removes method variance by focusing on correlations between rather than within methods of measurement. Several of the appendices include additional analyses of items in the QSCC. (Author/PR)

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THE COLLEGE ENVIRONMENT REVISITED: CURRENT DESCRIPTIONS AND A COMPARISON OF THREE METHODS OF ASSESSMENT

John A. Centra

Abstract

The "Questionnaire on Student and College Characteristics" (QSCC), designed to provide information about colleges that would be of interest to prospective students, was administered to upperclass students at over 200 institutions. The 135 items in the instrument elicit student perception and student self-report kinds of information relating to each institution. The purposes of this study were to gain a better understanding of QSCC item relationships, to identify dimensions that differentiate among four-year institutions, and to compare methods of assessing college environments.

This report consists of three sections. In the first section, a factor analysis of the 77 perceptual items in the QSCC is presented and discussed. In the second section, student perception and student self-report data from the QSCC were combined with published, objective information about each institution in order to investigate differences among college environments further. A total of 53 institutional characteristics were factor analyzed, resulting in six factors: Athletic vs. Cultural, Size with Cliquishness, Elitism, Activism with Flexibility, Student Satisfaction, and Social Life.

The three methods of assessing the college environment--student perceptions, student self-reports, and objective institutional data--were also compared by use of multimethod factor analysis, a new technique which removes method variance by focusing on correlations between rather than within methods of measurement. These results are presented in the third section of this report.

Several of the appendices in this report include additional analyses of items in the QSCC.

THE COLLEGE ENVIRONMENT REVISITED: CURRENT DESCRIPTIONS AND A COMPARISON OF THREE METHODS OF ASSESSMENT[1]

John A. Centra

College applicants have long been at a disadvantage: they know much less about the colleges to which they apply than the colleges know about these students as applicants. Most colleges require a great deal of specific information from each applicant, some of which, such as standardized test results, allows colleges to compare applicants directly. Students, on the other hand, are generally unable to obtain quantitative and standardized information about colleges, thereby making it very difficult for them to make objective comparisons between colleges.

Critics have long recognized that the applicant-college relationship needs to be brought in better balance. James Coleman (1969), in what he has termed the "symmetry principle in college choice," has recently recommended that more quantitative and qualitative information about colleges be published for applicant use. Coleman suggested that both the characteristics of the students attending each college and measures of the college social and intellectual climate should be included in this published information.

Both kinds of information were included in the "Questionnaire on Student and College Characteristics" (QSCC), an instrument developed in 1968 for the purpose of gathering information about colleges that applicants might find useful. The questionnaire was administered to upperclass students at a college. The rationale used in developing the questionnaire was governed by the question:

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[1]This study was supported by the College Entrance Examination Board.

What information could students at a college provide about themselves and their college that might best interpret the institution to prospective students? In establishing domains that seemed important to prospective students and in writing appropriate items, past research and a limited number of interviews with high school and college students were utilized. Further details on the development of the QSCC, including an analysis of the pretesting at eight colleges, are available elsewhere (Centra, 1968). A copy of the questionnaire is included as Appendix A of this report.

Items in the QSCC are of two general kinds: student perceptions of their institution (Parts I and II of the questionnaire), and student self-reports of their activities, interests, and demographic-family characteristics (Parts III and IV). Each of these two types of items has been used often in past research as separate and distinct methods of assessing the college environment. The perceptual approach, a method pioneered by Pace and Stern (1958), relies on students' reports of the activities and emphases of their institution. Of importance are the collective student perceptions of the general characteristics of their college; students are not required to report their own behavior or preferences. By contrast the second kind of item in QSCC and an alternate method of assessing the college environment emphasizes individual student behavior and characteristics (e.g., Astin, 1968; Warren, 1966). Unlike the perceptual approach, this latter method asks students to report the extent of their personal involvement in various activities, their individual goals, their demographic-background characteristics, and the like. The individual student responses are then averaged to represent each institution's score on each item.

These two general types of items or environmental assessment methods were included in the same questionnaire in order to provide a more complete and

varied description of how colleges differ from each other. In addition to this student-derived information, the study reported here includes published, objective institutional data, such as the average academic aptitude of students who enroll at each college, the faculty-student ratio, enrollment, college income per student, and similar information. Astin and Holland's Environmental Assessment Technique (1961) used objective data as well, although it was limited to characteristics of the student body only.

The major purpose of this study was to identify dimensions that differentiate among four-year colleges and universities by using data from the QSCC as well as objective institutional information. By so doing, a better understanding of QSCC item qualities and relationships as well as a better understanding of American higher education would hopefully be gained. A secondary purpose of this study was to investigate the extent to which college descriptions are validated by the separate methods of assessment considered in this study. This issue is investigated in the third section of this report. In the first two sections, patterns of relationships among the many institutional variables are studied by means of factor analysis. Two separate factor analyses were performed. The first was an analysis of the 77 perceptual items. The second, discussed in the second section of this report, combined factors derived from the perceptual items with student self-report items and objective institutional variables. The resulting dimensions help in understanding current differences among four-year institutions.

Some of the appendices of this report also include information dealing with various item analyses of the QSCC. Appendix B includes the means, standard deviations, and estimated omega squared values (Hays, 1963) for each of the 77 perceptual items in the QSCC. In Appendix D, the results of a repeated

administration of the QSCC are presented and discussed. The questionnaire was administered to the same students at two institutions in the Fall 1968 and in Spring 1969. The percentage of students who responded identically, similarly, or differently to each item is listed in Appendix D.

It should be stressed that for all analyses, the institution was used as the unit of analysis. Student responses from the QSCC for each institution were averaged as the institution's score.

Sample

The QSCC was administered mostly to upperclass students at over 200 institutions in Fall 1968. These institutions were College Board members who elected to administer the questionnaire as a possible aid in describing themselves to prospective students in the 1969 College Handbook.[2] The sample of institutions might be divided into three groups: the first group consisted of 116 colleges that received a very good student response to the QSCC, or more specifically where over two-thirds of a predetermined sample of students responded (the average response rate for this group was between 75%-80%); the second group of colleges included 98 where the number of students responding was fairly large, but the proportion was less than 66% of a designated sample of students; the third and smallest group consisted of those colleges where only a small and probably unrepresentative group of students responded to the QSCC. Because it was judged inadequate, this last group was not used for any of the analyses in this report. The first and second groups (N=214) of colleges were combined for an analysis of the perceptual sections of QSCC (Parts I and II), while only

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[2]The limited extent to which colleges used information from the QSCC in the 1969 College Handbook is summarized in Appendix C.

the 116 colleges with a "good" student response were drawn on for all other analyses. The perceptual items, which require students to report the general features of their college, are less sensitive to individual student differences. Thus a truly representative sample of students is not critical to obtaining valid institutional scores. On the other hand, when students are reporting their own behavior or interests, a representative sample of students from each institution is especially crucial. Only then does an institution's score represent an average of all kinds of students at a college. For this reason only the 116 colleges with a representative student sample were used in analyzing student self-report responses.

The QSCC sample, when compared to the national distribution of four-year institutions by type of control, was underrepresented for the public university and public college categories. Specifically, both the first (N=116) and second (N=98) group of colleges included half as many public universities or colleges proportionately as in the national totals. Independent colleges, on the other hand, were overrepresented in both QSCC samples by about the same amount. For all other categories--independent universities, Protestant-controlled institutions, Catholic institutions, and technical institutes--each of the two QSCC samples had approximately the same percentage as found in the national totals.

Analysis of Student Perceptions

The first 77 of the 135 items in the QSCC elicit students' perceptions of their college. Students respond on a four-point scale (true-not true, or agree-disagree) to such statements as: "Faculty members tend to be aloof and somewhat formal with students." Mean responses on each of the 77 items for each of 214 institutions were first computed. Then, using the institution as the unit of analysis, a principal axis factor analysis with an equamax rotation was performed.[3] The equamax rotation method results in approximately equal variances across factors. Eight factors were identified from the correlations among the 77 perceptual items.[4] The selected items and the factor loadings, which represent the correlation of the item with the factor, are listed below along with a brief summary of the factor. In computing factor scale scores for all subsequent analyses, only those high-loading items that were closely related in content and therefore most meaningfully described the rotated factor were included. Hereafter, in this report the term factor scores will refer to scales based on the indicated rotation of the principal axis solution. Items excluded in computing factor scores are marked below with an asterisk. With the exception of one item, factor loadings for items included in each factor score were greater than .50.

Factor 1: Restrictiveness	Factor Loading
The institution exercises too much authority over student life outside the classroom	.90

[3]Tucker's adjusted highest row element procedure was used to obtain communality estimates. A more complete description of this procedure can be found in Carlson (1967).

[4]Six, 8, and 10 factors were rotated, with the 8 factor solution judged to be most meaningful.

Factor 1: Restrictiveness (cont'd)	Factor Loading
There are many rules governing student behavior	.85
There are many administrative restrictions aimed at regulating conduct between the sexes	.82
Rules and regulations governing student behavior on this campus are sensible	-.81
Personal grooming is considered to be a matter of individual taste and concern	-.75
The college believes it has an obligation to parents to look after the well-being of students	.74
There are strict regulations governing student dress	.72
The college authorities show displeasure with unusual student appearances, e.g., beards, long hair, etc.	.69
A person who advocates unpopular actions or ideas, no matter how extreme, would be permitted to speak on this campus	-.64
In general, religion plays an important role on campus	.58*

Items in the first factor deal generally with college rules and regulations. Institutions with high scores on this dimension exercise a great deal of authority over students in their appearance and dress, in the conduct between the sexes, and in who shall be invited to speak on campus. In loco parentis is the practice at these institutions, where to some degree religion also plays an important role on campus. An appropriate name for this factor would seem to be Restrictiveness. By responding that there is "too much" authority, or that campus rules are not sensible, students would seem to be displaying some dissatisfaction with the amount of restrictiveness at such institutions.

Factor 2: Faculty-Student Interaction	Factor Loading
Most of my professors seem interested in me as an individual	.80
I am satisfied with the opportunities I have had in the past year to meet with my instructors to discuss course work and my progress	.78
There is not much contact between professors and undergraduates	-.78
Faculty members tend to be aloof and somewhat formal with students	-.73

Factor 2: Faculty-Student Interaction (cont'd)	Factor Loading
High-ranking faculty members rarely teach freshman and sophomore courses	-.71
Most faculty members seem genuinely interested in teaching	.68
Students are encouraged to think for themselves	.58*
Upperclassmen seldom socialize with freshmen	-.54*
Capable students are encouraged to participate in, or to conduct, their own research projects. (Also had a factor loading of .37 with factor 5)	.46*

For the second factor, the most significant items--that is those with the highest factor loadings--define a campus in which faculty members are interested in students and in teaching. This factor has been termed Faculty-Student Interaction, with high scores indicating colleges where students perceive a great deal of interaction. Interestingly enough, students also feel they are encouraged to think for themselves at such institutions.

Factor 3: Activism	Factor Loading
Most of the undergraduates on this campus avoid anything controversial	-.78
Many students at this college show great concern about political, economic and social issues	.68
Nationally controversial student organizations are active on campus	.66
Protest demonstrations are popular with the students on this campus as a way of expressing their opinions	.66
A visitor to this campus would notice political activity among students and faculty members	.60
Student groups often sponsor controversial speakers	.56
The prevailing attitude here is one of "playing it cool" rather than deeply committing oneself to an issue. (Also has a loading of .46 with factor 6)	-.56

The third factor is particularly intriguing in that it probably reflects a relatively recent emphasis among American colleges. Termed Activism, this factor differentiates among colleges according to the degree of concern their students show over political, social, and economic issues. At high scoring

institutions protest demonstrations and political activity are prevalent, and students are deeply committed to issues, regardless of how controversial.

Factor 4: Nonacademic Emphasis	Factor Loading
Some fraternities, sororities, or similar groups do not select members from certain minority groups	.69
Social life centers in fraternities, sororities, or similar groups	.66
Every year a considerable number of students here are suspended or expelled for disciplinary reasons	.60
A high degree of academic honesty is characteristic of students at this college	-.59
There are courses or programs available to students with educational deficiencies (remedial English and mathematics, how-to-study, etc.)	.59
Very few students are placed on academic probation	-.55
Course offerings are designed to accommodate a wide range of educational-vocational career plans	.53*
Students participate in the formulation of nonacademic regulations that affect them (Also has loading of .41 with factor 2)	-.52*

The fourth factor is labelled Nonacademic Emphasis. Institutions high on this dimension are characterized as having active fraternities or sororities, many of which students say do not select members from certain minority groups; academic probation or expulsion for disciplinary reasons are also not uncommon at these institutions; remedial courses are available to students; and finally, students deny that academic honesty is characteristic behavior at these colleges or universities.

Factor 5: Curriculum Flexibility	Factor Loading
I had already decided on a major when I entered as a freshman	-.80
Students are encouraged to select a major upon admission or during the freshman year	-.79
Students are given the opportunity to try out a variety of course areas before deciding on a major	.75
Freshmen and sophomores are given considerable freedom in choosing their courses	.55
There are courses or programs available for academically gifted students (honors program, independent study, etc.). (Also has a loading of .40 with factor 7)	.46

The fifth factor includes five items dealing with students' freedom in choosing courses and their major field of study. At one extreme (high scores) are institutions where students are given the opportunity to try out a variety of courses before deciding on a major; at the opposite extreme are institutions where students are expected to select a major at entrance or during the freshman year. High scoring institutions also have courses or programs for academically gifted students. Curriculum Flexibility is the name given to this factor.

Factor 6: Challenge	Factor Loading
Many of the students are more concerned about their social lives--dating, parties, etc.--than they are about their academic lives	-.66
My instructors have not challenged me	-.64
Many teachers allow students to slip by with less than their best efforts	-.59
Many students use personality, personal connections, "apple-polishing," or bluff to get through courses. (Has loading of .50 with factor 4)	-.59
There are no good bookstores on or near the campus	-.54
Many required freshman courses repeat material covered in high school	-.51
The library has excellent resources for undergraduate assignments	.50
The range of books available in the campus bookstore includes much more than assigned texts and suggested readings	.48*

The sixth factor measures the degree of challenge that students perceive. Challenging institutions are where students feel challenged by the faculty and where students show concern for their academic lives. At these same institutions, students also report the availability of good bookstores and an excellent library for undergraduate assignments. Unchallenging institutions not only fail in these aspects but also tend to repeat material covered in high schools. As will be shown later, there is a high negative relationship between this sixth factor, which has been titled Challenge, and factor 4 (Nonacademic Emphasis).

Factor 7: Laboratory Facilities	Factor Loading
There are excellent laboratory facilities for undergraduates studying in the biological sciences	.81
There are excellent laboratory facilities for undergraduates studying in the physical sciences	.72

The seventh factor is a brief two-item factor dealing with Laboratory Facilities. High scoring institutions have, what students report to be, excellent facilities in both the biological and physical sciences.

Factor 8: Cultural Facilities	Factor Loading
There are excellent studio facilities here for undergraduates studying art	.66
There are excellent studio facilities here for undergraduates studying music	.62
The surrounding community is cordial to students	.60
The institution annually sponsors a rich cultural program that includes lectures, concerts, plays, and art exhibits	.50
Rules governing residence hall hours are strictly enforced	.47*
Student representatives serve on several college committees with faculty members or administrators	.45*

The eighth and last factor is termed Cultural Facilities. Excellent studio facilities in music and in art as well as a full annual cultural program typify institutions high on this dimension. Another feature of this factor is the manner in which the surrounding community reacts to students, with high scoring institutions enjoying cordial relations.

Factor Scale Intercorrelations

Intercorrelations among the eight college perception factors are given in Table 1. The pattern of relationships suggest two primary groupings, each consisting of three of the factors. One group of factors consists of positive Restrictiveness together with negative Activism and Curriculum Flexibility.

Institutions with a great many rules and regulations, according to this first pattern of intercorrelations, also tend to have a rigid curriculum and, at the same time, to have little student involvement with political and social activity. These three characteristics would seem logically to go together: a campus with many academic and social restrictions would not encourage student political activity nor would such a climate retain very many politically concerned students.

The second group consists of the Challenge, Nonacademic Emphasis (negative), and Faculty-Student Interaction factors. Institutions which students see as challenging also tend to have faculty who are concerned with students and with teaching; these same institutions, moreover, emphasize academic rather than social matters. Conversely, students find less intellectual challenge at institutions which are not strongly oriented toward academic matters and where faculty demonstrate little concern for students. These three factors, like the first, also appear to be logically interrelated.

The remaining two factors, Laboratory Facilities and Cultural Facilities, do not correlate very highly with each other nor with any of the other six factors.

One might argue that there are four rather than eight perception factors: the two "facilities" factors plus the two groups of three factors each. To some degree this position is defensible. But the size of the correlations between factors in Table 1 are no more than .64, suggesting that there is still a good deal of variance accounted for by each factor separately. Moreover whether four or eight factors are retained depends in large part on the intended use of the factors. In describing college climates to prospective students, for example, the eight factors provide more specific and useful

Table 1

Intercorrelations among the Eight College Perception Factor Scale Scores

(N=116 institutions)

	Restrictiveness	Faculty-Student Interaction	Activism	Non-academic	Curriculum Flexibility	Challenge	Laboratory Facilities	Cultural Facilities
Restrictiveness		-.03	-.64	-.02	-.44	-.29	-.02	.01
Faculty-student interaction			.14	-.64	.38	.59	.18	.33
Activism				-.08	.51	.32	.09	.21
Nonacademic					-.07	-.59	.03	-.25
Curriculum flexibility						.29	.30	.27
Challenge							.23	.29
Laboratory facilities								.25
Cultural facilities								

information than do the four factors. The same argument may, in fact, apply to using certain individual items in addition to factors for college descriptions.

Factor Scale Reliability

Coefficient alpha reliabilities and omega squared values for each of the eight factor scores are presented in Table 2. Coefficient alpha, as a measure of internal consistency, indicates the extent to which items comprising a given factor are homogeneous in content. For six of the factors, coefficient alpha reliabilities are .82 or above. For Laboratory Facilities and Cultural Facilities, the alphas are .73 and .51 respectively. Thus the internal consistency reliabilities for both of these factors, and particularly for Cultural Facilities, are not especially high; the first six factors, on the other hand, are quite reliable in terms of internal consistency.

Also of interest regarding the factors is some indication of how well each factor discriminates among colleges. Estimated omega squared provides this information as a ratio of the total variance accounted for by the variance between colleges (Hays, 1963). The estimated omega squared values in Table 2 thus indicate that, for example, 68% of the variance in the scores for the Nonacademic Emphasis factor is predictable from variance between colleges. The .21 omega squared value for the Challenge factor is the lowest for any of the factors and may be explained by the large variance in responses within institutions (which is part of the total variance). That is, in comparison to differences between colleges, students within each college vary a good deal in how much personal challenge they feel their institution provides.

Estimated omega squared values for each of the 77 perceptual items are given in Appendix B, along with additional information on how the statistic is

Table 2

Coefficient Alpha Reliabilities and Omega Squared Values for Each of the Eight Perceptual Factor Scale Scores (N=116 institutions)

	Coefficient Alpha	Estimated Omega Squared
Restrictiveness	.94	.43
Faculty-student interaction	.96	.25
Activism	.90	.27
Nonacademic emphasis	.82	.68
Curriculum flexibility	.88	.44
Challenge	.84	.21
Laboratory facilities	.73	.26
Cultural facilities	.51	.27

derived (footnoted). Half of the items have values under .20. Compared to the eight factor scores, therefore, these particular items do not appear to discriminate as well between colleges, although most account for enough variance to be considered useful in describing college differences.

In selecting items or scales for describing college differences, estimated omega squared would seem to be a worthwhile statistic to consider along with information derived from other analyses.

Six Dimensions of the College Environment

As indicated previously, the QSCC includes two general kinds of items: student perceptions of their institution and student self-reports of their activities, interests, and personal characteristics. If information from these two sources were combined with published, objective institutional data, what would be the resulting descriptions of college environments? To answer this question a factor analysis of the three kinds of data was performed. There were 53 variables: the eight factor scores based on student perceptions, 34 student self-report items, and 11 objective institutional characteristics taken from various published sources. It was not deemed necessary to factor analyze the latter two sets of data separately since a total of 53 variables was not an unreasonable number to work with. There was also an interest in investigating correlations between perceptual factor scores and the separate items included among the student self-report and objective institutional data (shown in Appendix E).

The 34 student self-report items included all 25 items in Part III (student involvement with various activities), and those items in Part IV for which responses were scaled on a continuum. These included parental socioeconomic status (average of items 10-13), graduate school plans (item 17), hours spent in part-time or full-time employment (20), expenses for social life and incidentals (21), time spent studying (22), frequency of dating (23), satisfaction with the proportion of men and women students at the college (24), recommendation to a high school senior with similar interests (26), and satisfaction with the help college has given in progressing toward personal goals (33).

Complete information on the 11 objective institutional characteristics was available for 103 of the 116 colleges with a good student response rate.

The means and standard deviations for these 11 characteristics based on the 103 institutions are presented in Table 3. Several of these mean characteristics differ significantly from the national averages. For example, compared to figures given in the Education Directory (1967) and in Opening Fall Enrollments in Higher Education (1967), the average enrollment figure of 1389 for the 103 institutions is less than half the national mean; also, closer to 50% rather than 65% of all four-year institutions are religiously affiliated. The representativeness of the sample is, however, not particularly crucial for the purposes of this factor analysis; more importantly, a wide range of institutions should be represented in the sample and this indeed is the case.

Results of the rotation of the factor analysis of the 53 variables appear in Table 4. Once again a principal axis analysis with an equamax rotation was performed. Only variables with factor loadings of .40 or higher are included. Six factors would seem to summarize adequately the dimensions along which colleges differ: Athletic vs. Cultural; Size, Cliquishness; Elitism; Activism, Flexibility; Student Satisfaction; and Social Life.

Athletic vs. Cultural

The first dimension differentiates among colleges according to the sex composition of their students and the activities in which those students are involved, particularly in athletic vs. cultural pursuits. One end of the continuum identifies institutions which are largely male and where students report heavy involvement in all types of athletic activity while participating minimally in cultural activities. At the other extreme are primarily female colleges whose students prefer artistic-dramatic activities to athletic endeavors.

Table 3

Institutional Mean Scores and Standard Deviations

for the 11 Objective Institutional Characteristics[a]

(N=103)

	Mean	Standard Deviations
Total enrollment ($\log_e$)	1,389 (7.2358)	
Percentage of men enrolled	40	34
Religiously affiliated (1=yes)	.65	.48
Mean SAT-Verbal	518	54
Mean SAT-Math	527	55
Percentage in residence halls	64	24
Fraternities/sororities (1=yes)	.44	.50
Percentage to grad./prof. schools	32	19
Faculty/student ratio	.07 (about 1/14)	.02
Books per student	87	97
College income per student	2504	1167

[a]Sources of information included Cass and Birnbaum (1968), Manual of Freshman Class Profiles (CEEB, 1967), and Singletary (1968).

Table 4

Equamax Rotation of the Factor Analysis of 53 College Variables
(N=103 institutions)

Variable	Factor Loading (correlation with the factor)
1st factor: Athletic vs. Cultural	
Student Self-Report Data	
Involvement in intramural athletics	.88
" " intercollegiate athletics	.86
" " individual competitive sports	.72
" " art activities	-.66
" " recreational-outing activities	.65
" " foreign or art films	-.59
" " pep rallies and other school spirit activities	.54
" " plays or dramatic productions	-.48
" " fraternity, sorority, or similar group	.47
" " folk, ballet or modern dance	-.47
" " poetry or drama readings	-.40
Expectation of attending graduate or professional school	.41
Published Objective Institutional Data	
Percentage of men enrolled	.76
Percentage of students to graduate or professional schools	.44
2nd factor: Size, Cliquishness	
Student Perceptions	
Nonacademic emphasis	-.74
Faculty-student interaction	.60
Student Self-Report Data	
Involvement in campus issues and student government	.67
" " religious activities	.62
" " campus publications	.51
" " fraternity, sorority, or similar group	-.49
" " vocal music	.48
" " community service	.44
Amount spent on social life and incidentals	-.42
Published Objective Institutional Data	
Existence of fraternities or sororities	-.68
Enrollment	-.67
Percentage of men enrolled	-.43
3rd factor: Elitism	
Student Perceptions	
Challenge	.56
Student Self-Report Data	
Involvement in speech and debate	-.51
Amount of time spent studying	.64
Family socioeconomic status	.46
Published Objective Institutional Data	
Average SAT-V score	.81
Average SAT-M score	.81
Amount of college income per student	.76
Number of faculty per student	.53

Table 4 (Continued)

Variable	Factor Loading (correlation with the factor)
4th factor: Activism, Flexibility	
Student Perceptions	
Activism	.86
Restrictiveness	-.61
Curriculum flexibility	.52
Student Self-Report Data	
Involvement in student activist organizations	.81
" " civil rights activities	.74
" " activities focusing on international problems	.66
" " political activities	.40
5th factor: Student Satisfaction	
Student Perceptions	
Cultural facilities	.63
Laboratory facilities	.55
Challenge	.50
Curriculum flexibility	.48
Faculty-student interaction	.45
Student Self-Report Data	
Involvement in instrumental music	.66
" " plays or dramatic productions	.44
" " vocal music	.43
Satisfaction with the college	.71
Would recommend college to prospective students	.56
6th factor: Social Life	
Student Self-Report Data	
Involvement in dating and social life	.78
" " campus publications	.46
Number of dates	.81
Family socioeconomic status	.60
Hours working part or full time	-.50
Published Objective Institutional Data	
Percentage in residence halls	.50

Compared to female-cultural colleges, the male athletic colleges also have more of their students go on for further study; both the .44 factor loading for the percentage given by the college and the .41 loading for students' expectations of attending graduate or professional school substantiate this. In view of the higher proportion of men who attend medical, dental, law, and most other graduate schools, this finding is understandable. At male-athletic colleges, students are also more involved in fraternal or similar organizations (.47) and in school spirit activities (.54).

Size, Cliquishness

The dominant features of the second dimension are the size of the institution and the varying emphases on organized social groups. The latter feature, termed "cliquishness," refers primarily to the influence of fraternities, sororities, or similar groups, although other organized campus activities are also significant.

The dimension consists, on the one hand, of small institutions where fraternal organizations are rare or unimportant (the nonacademic perceptual score, it might be recalled, includes two items dealing with the importance of fraternities and sororities on campus). In lieu of fraternity-sorority involvement, students report heavy involvement in campus government (.67) and campus publications (.51), in religious activities (.62), in vocal music groups (.48), and in community service (.44). Students at these small non-cliquish colleges, who frequently are women, also report spending minimal amounts of money on social life and incidentals (-.42), and perceive a great deal of faculty-student interaction (.60).

By contrast, the opposite end of the dimension includes large institutions with strong social group organizations and minimal student involvement in other campus activities. Students perceive little interaction with faculty, and the institutions tend to have more men than women.

Elitism

The third factor discriminates among colleges on a money-student ability dimension. Termed elitism, it includes such published objective institutional characteristics as student academic aptitude (SAT-V and SAT-M both have .81 loadings), the amount of college income per student (.76), and the number of faculty per student (.53). The elite extreme of the dimension identifies, of course, high income colleges attended by bright students. The students at these elite institutions perceive the climate as challenging and spend more than an average amount of time studying. It is not readily apparent why students report minimal involvement in speech and debate activities (-.51) at these institutions, but the high family socioeconomic position reported by students is certainly appropriate (.46).

In contrast to this elite group are the "have-not" institutions found at the opposite end of the continuum: those nonselective colleges with little income and where students report little academic challenge.

Activism, Flexibility

As indicated in Table 4, the fourth dimension appears to discriminate among institutions on a continuum with activism and flexibility at one extreme and nonactivism along with rigidity (in curriculum and social regulations) at the opposite pole. The factor is defined solely by the student perceptual and self-report responses.

The perceptual scores include Activism (.86), Curriculum Flexibility (.52), and negative Restrictiveness (-.61). The self-report items, all with positive loadings, include students' involvement in activist organizations (.81), civil rights activities (.74), activities focusing on international problems (.66), and political activities (.40).

The variables for this fourth factor, then, are very homogeneous. They also clearly define, at one extreme, a group of institutions which place few restrictions on students and where students, in turn, are very active in campus or national politics, civil rights, and similar "activist" issues. Colleges with a great many rules regulating student academic and social life have little student involvement in "activist" organizations or activities. Interestingly enough, neither the size of the institution nor the ability level of students has any relationship to this factor.

Student Satisfaction

The extent to which students are satisfied with their college is the most important single item in this fifth factor (.71). Other self-report items included in this factor are whether the student would recommend the college to a prospective student (.56), and student involvement in instrumental music (.66), vocal music (.43), and dramatics (.44). Significantly, five of the eight perception scores were part of this fifth dimension. Two of these involved facilities (Cultural Facilities .63, and Laboratory Facilities .55); one pertained to the amount of Challenge perceived (.50); another with Curriculum Flexibility (.48); and the last with Faculty-Student Interaction (.45).

Why should five of the perception scores end up as part of a satisfaction dimension? One reason is simply that students are more satisfied at institutions

in which they perceive good facilities, a flexible curriculum, a friendly approachable faculty, and an academic challenge. While such an interpretation is perfectly plausible, another interpretation that involves the nature of perceptual type items might be considered. It may be that the degree of general satisfaction which students have with their institution also heavily influences many of the perceptions they have about conditions at the college. Cause and effect cannot, of course, be ascertained in this instance.

Social Life

The sixth and last dimension discriminates among colleges according to the amount of dating and other social activities in which students partake. Number of dates (.81) and involvement in dating and social life (.78), both student self-report variables, were most significant. Also related were students' socioeconomic status (.60), involvement in campus publications (.46), and hours working part or full-time (-.50). The only objective institutional characteristic related to this social life dimension was the percentage of students in residence halls (.50).

This last factor seems to describe, at one extreme, the residential campus with a very active social life. Students are fairly well-to-do and do not have to work to meet their college expenses; this also leaves more time for social activities. In short, this type of college is what is commonly referred to as a "party" school.

Comparison of Three Methods of Assessing College Environments

There is evidence that the three methods of assessing the college environment considered in this report--student perceptions, student self-reports, and objective institutional data--yield independent measures of college characteristics. More specifically, variables within a single method appear to share more in common with each other than they do with variables from other methods. This was evidenced in the preceding section of this report when a factor analysis of 53 institutional variables yielded several factors that tended to be specific to each method of assessment. For example, five of the eight variables based on student perceptions received salient loadings on one factor (factor 5), and over half of the variables based on published data loaded on either factor 2 or 3 (see Table 4). Additional evidence of method variance is provided by Astin (1968) who analyzed student self-report and student perception data from 246 institutions and concluded that the two methods involve somewhat different aspects of institutional differences.

In order to investigate further student perceptions, student self-reports, and objective institutional measures as methods of assessing college environments, a new technique referred to as multimethod factor analysis (Jackson, 1969) will be employed with the QSCC data and will be reported in this section of the report. Multimethod factor analysis was developed within the general framework of factor analysis and focuses on correlations between, rather than within, methods of measurement. The technique is not only important as a means of examining common variance across methods, but as a way of examining convergent and discriminant validity for variables purportedly measured by more than one method (Campbell & Fiske, 1959).

The importance of convergent and discriminant validity has been discussed by Campbell and Fiske (1959), who propose the use of a multitrait-multimethod matrix to evaluate validity. Campbell and Fiske argue that methods or tests should converge in their assessment of the same trait; in addition, if the method of assessment is to be considered independent of a given trait or variable, it must also show discriminant validity. Thus a method may be invalid if the variables measured correlate too highly with variables with which they are supposed to differ.

Because of a number of limitations in evaluating multitrait-multimethod matrices, Jackson (1969) recommends multimethod factor analysis as a method of examining convergent and discriminant validity. He suggests eliminating method variance from multitrait-multimethod matrices by "orthogonalizing the diagonal monomethod matrices prior to a principal components analysis and rotation of axes" (Jackson, 1969, p. 39). Orthogonalization is achieved by substituting diagonal values of unity for communality estimates and by substituting zeros for the correlations between tests within a single method of measurement. In addition to separating method from trait variance, orthogonalization results in a larger number of factors than classical factor analysis.

An illustration of multimethod factor analysis and how it is being used in this study of college environments appears in Figure 1. While Jackson has discussed the technique in reference to validating methods of measuring individual characteristics (personality traits, for example), methods of measuring institutional variables are being compared in this study of college environments. Thus, in the context of the present study, the 53 institutional variables derived from student perceptions, published objective data, and student self-reports were intercorrelated and factor analyzed using Jackson's

	Student Perceptions	Published Objective Institutional Data	Student Self-Report Data
Student Perceptions	R_{11} (I)	R_{12}	R_{13}
Published Objective Institutional Data	R_{21}	R_{22} (I)	R_{23}
Student Self-Report Data	R_{31}	R_{32}	R_{33} (I)

Figure 1. Illustration of multimethod factor analysis of institutional scores based on three methods of measuring the college environment. The original correlation matrix was modified by replacing the monomethod-multivariable quadrant with identity matrices (I); the identity matrices have unities as diagonal elements and zeros as off diagonal elements.

multimethod procedure. The procedure involves replacing the monomethod-multivariable quadrants of the correlation matrix with identity matrices. As indicated in Figure 1, the original correlations in the quadrants labelled "I" are replaced with zeros, and unities are placed in the diagonal positions. In so doing, all correlation, and therefore all variance unique to a single method of assessment, is removed.

There are two purposes in applying multimethod factor analysis to the methods of assessing college environments used in this report. First, by allowing common variance across methods to be examined, the technique should uncover institutional dimensions common to the three methods of assessment. Hopefully such an analysis will contribute to a better understanding of the three methods of describing institutional environments. Secondly, it should be possible to examine the convergent and discriminant validity of those institutional variables that are purportedly measured by more than one method. Strictly speaking, none of the 53 variables are <u>exactly</u> alike; several do, however, attempt to measure the same domain and in some instances are assessed by more than one of the three methods. The extent to which each of several institutional variables are measured by more than one method is shown in Table 5. Twenty-seven of the 53 variables appear to overlap at least two methods. The general area of student activism, for example, is assessed by student perceptions (Activism), and by self-reported student involvement in activist organizations or civil rights activities. What might be termed academic competitiveness or scholarship is measured perhaps by three methods: student perceptions (Challenge), student self-reported amount of time spent studying, and published institutional data (number of books per student, percentage of faculty with a doctorate, average student academic ability).

Table 5

Expected Overlap among 53 Variables for Three Methods of Assessing the College Environment

Perceptual Variables (8 Factors)	Published Objective Variables (Total of 11 available)	Student Self-Report Variables (Total of 34 available)
Cultural facilities		Involvement in art, drama, dance, music
Faculty-student interaction	Enrollment; faculty-student ratio	
Challenge	Books per student; mean SAT scores	Amount of time studying
Activism		Involvement in activist org., civil rights, international problems
	Religious affiliation	Involvement in religious activities
	Percentage of students to graduate or professional school	Expectation of attending graduate or professional school
Nonacademic emphasis	Existence of fraternities/ sororities	Involvement in fraternity, sorority or similar group; involvement in school spirit activities; involvement in dating and social life
Lab facilities		Involvement in science activities

Each of these pieces of information, in other words, is generally considered a reflection of the academic environment of an institution.

For the 27 institutional variables that appear to be assessed by more than one method, "convergent and discriminant" validity will therefore be examined. Such information should indicate the extent to which the same institutional characteristic may be measured by more than one method.

Results of the multimethod factor analysis appear in Table 6. The 10 factors identified are more free of method variance than the dimensions identified by standard factor analysis. Both the 6 factor solution presented as Table 4 and a 10 factor solution based on standard factor analysis, not shown here, support this observation.[5] Orthogonalization has also broken factor patterns into specific units more nearly equal in size, thereby facilitating an evaluation of convergent and discriminant validity of measures across methods. In comparing the multimethod results with the expected overlap across methods (Table 5), some convergence of measures is evidenced. The following discussion of each factor includes comments on both the interpretation of each dimension and on the validity of measures across methods.

Factor 1. The pattern of correlations for this factor suggests a "Female, Cultural vs. Male, Athletic" dimension. It is similar to the first factor of the standard factor analysis except that there are fewer salient self-report variables and the student perception variable of Cultural Facilities is now part of the factor. Only student self-reported involvement in art activities loads higher than .40 on the factor; drama, dance, and music were expected to also be part of the factor (Table 5) but were not. Student perceptions of

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[5]The ten factor solution yielded one factor in which six of eight perceptual measures received salient loadings on one factor; other dimensions in this standard factor analysis were equally loaded with method variance.

Table 6

Multimethod Factor Analysis of Measures of the College Environment
(N=103 institutions)

Factor	Method, Variables and Factor Loadings[a]					
	Student Perceptions		Published Objective Institutional Data		Student Self-Report Data	
1	Cultural fac.	.79	% of men enrolled	-1.03[b]	Inv. in intramural ath.	-.54
	Nonacademic	-.49	% to grad. or prof. sch.	-.43	Inv. in art	.47
					Inv. in intercoll. ath.	-.45
2	Faculty-student interaction	.74	Enrollment	-.79	Inv. in campus issues and student government	.71
	Nonacademic	-.50	Faculty per student	.46	Inv. in campus publications	.63
			College income per stu.	.46		
3	Challenge	.63	Mean freshman SAT-M	.75	Time spent studying	.52
			Mean freshman SAT-V	.73	Inv. in speech and debate	-.51
			College income per stu.	.46	Family socioeconomic stat.	.41
4	Activism	.95	No. of books per student	.50	Inv. in activist org.	.62
					Inv. in civil rights	.57
5	Restrictiveness	.75	% to grad. or prof. sch.	-.61	Inv. in relig. activities	.54
					Expect to attend grad. sch.	-.48
					Money spent on social exp.	-.45
6	Curriculum flexibility	.50	% living in residence halls	.80	Inv. in dating and social life	.42
7	Nonacademic	.61	Existence of fraternities or sororities	.87	Inv. in fraternity or sorority	.73
8	Faculty-student interaction	.49	(none over .23)		Satisfaction with coll.	.64
	Challenge	.46			Would recommend college	.61
9	(none over .27)		Religious affiliation	.80	Inv. in organized politics	.42
10	Lab facilities	.75			Inv. in career clubs	.45
					Inv. in science activities	.44

[a]All variables with loadings of .40 or more have been included. A principal components analysis with a varimax rotation was performed.

[b]A loading of 1.00 or higher, as in this instance, is possible due to the fact that the supermatrix of correlations with identity matrices substituted for monomethod correlation matrices is non-Gramian (see Jackson, 1969, p. 40).

cultural facilities and their personal involvement in a wide variety of cultural activities are therefore not alternate ways of describing the same institutional variable.

Factor 2. This second dimension, heavily influenced by student enrollment, is somewhat similar to the second factor resulting from the standard factor analysis. Perceived faculty-student interaction receives a high loading (.74) and the published faculty-student ratio a moderate loading. These two variables, along with enrollment, were expected to load on the same dimension, indicating validity for the two methods of measuring student contact with faculty. The fact that the number of faculty per student received only a moderate loading, however, suggests that the faculty-student ratio also reflects faculty involvement in research or nonteaching duties and is not necessarily an accurate indication of faculty contact with students.

Factor 3. Almost identical to the third factor of the standard factor analysis ("Elitism"), this factor also reflects academic stimulation. Student-perceived academic "challenge," the mean freshman SAT scores, and student self-reported time spent studying are generally considered measures of the academic environment; these institutional variables, each based on a different method, received the highest loadings on this third factor. The number of library books per student is usually considered an additional measure of the academic environment, but it did not receive a salient loading; its relevance as an academic environment measure critical to students is therefore questionable.

Factor 4. Student perceived activism (.95), and student self-reported involvement in activist organizations (.62) and civil rights activities (.57) loaded highly, as expected, on this fourth factor. The two methods would therefore seem to converge in their assessment of campus political-social

activity. The number of library books per student was the only objective institutional characteristic with a noticeable loading on this dimension.

Factor 5. The pattern of correlations for this fifth factor suggests the highly regulated campus which sends few students to graduate school. Conversely, colleges at the alternate pole tend to be much less restrictive and to send a higher percentage on for further study. Both the percentage to graduate school published by the college and the percentage of students who report that they expect to attend received salient loadings.

Factor 6. The sixth dimension includes one variable from each method: curriculum flexibility, as indicated by student perceptions; the percentage of students in residence halls (published objective data); and student self-reported involvement in dating and social life. None of these variables were expected to overlap with each other and logically cannot be construed as convergent and discriminant validity for a specific institutional variable.

Factor 7. There is little question that this is a fraternity-sorority dimension. Variables relating to fraternity-sorority emphasis from all three methods, as expected, loaded on this factor: student perceptions of the nonacademic environment (.61), which is based heavily on fraternity-sorority life; the existence of fraternities and sororities (.87), as revealed in published data; and student self-reported involvement in fraternities or sororities (.73). The nonacademic perceptual variable received secondary loadings on other factors because of the variety of items that make up the score. Student self-reported involvement in social and school spirit activities did not load on this dimension as expected.

Factors 8 and 9. The variables within each of these two factors were not expected to overlap. Student (self-reported) satisfaction with their college

had, in the standard factor analysis, loaded with five of the perceptual variables. Only two of the perceptual variables now had loadings greater than .40 on the same dimension as student satisfaction. Factor 9 includes religiously affiliated colleges; student involvement in religious activities did not load on this factor as expected, however. Apparently enrolling at a religiously affiliated college does not assure that students will also become deeply involved in religious activities. In fact, as suggested by factor nine, they would more likely get involved in organized politics (.42).

Factor 10. Student perceptions of lab facilities and their self-reported involvement in science activities were expected to be part of the same factor as indeed they are in this tenth factor.

* * *

What can be concluded from the results of the multimethod factor analysis? First, it is clear that several of the factors derived from the multimethod analysis are similar to those from the standard factor analysis. In particular the first four factors from both analyses identify essentially the same college dimensions, although the multimethod factors include variables from each of the three methods and tend to be more specific than the factors from the standard analysis. In other words, in spite of method variance being removed, the first four factors remain essentially the same, arguing it would seem for the stability and validity of these factors. These four factors thus are not the result of differences related to methods of assessment but rather reflect valid descriptions of how four-year institutions differ from each other.

Second, the expected overlap between variables (Table 5) did not materialize in every case. There were, however, many instances when convergent and

discriminant validity for the specific methods and variables were evidenced--for example, student perceptions of activism and student self-reports of involvement in activist groups both loaded on one factor only. Of the 27 variables, 17 overlapped as expected. Those that did not overlap as expected cannot be assumed to measure the same institutional domain, even though they may appear to do so. In sum, the multimethod analysis did appear to illuminate the relationships of college environment variables from one method of assessment to variables in another method.

Summary and Concluding Remarks

The "Questionnaire on Student and College Characteristics" (QSCC), designed to provide information about colleges that would be of interest to prospective students, was administered to upperclass students at over 200 institutions. The 135 items in the instrument elicit student perception and student self-report kinds of information relating to each institution. The purposes of this study were to gain a better understanding of QSCC item relationships, to identify dimensions that differentiate among four-year institutions, and to compare methods of assessing college environments.

In the first of three sections to this report, a factor analysis of the 77 perceptual items in the QSCC is presented and discussed. Using the institution as the sampling unit, eight factors were identified: Restrictiveness, Faculty-Student Interaction, Activism, Nonacademic Emphasis, Curriculum Flexibility, Challenge, Laboratory Facilities, and Cultural Facilities. Internal consistency reliabilities for the first six factors were high (.82 and above), and factor intercorrelations among 116 institutions revealed no two factors that correlated higher than .64 with each other.

To some degree several of these eight perceptual factors are analogous to factors described by Astin (1968) and by Pace (1963, 1967) in their studies of students' perceptions of the college environment. Astin identified eight "college image" factors, five of which parallel factors from the QSCC. These were Academic Competitiveness (Challenge), Concern for the Individual Student (Faculty-Student Interaction), Permissiveness (Restrictiveness), Flexibility of the Curriculum (Curriculum Flexibility), and Emphasis on Social Life (Nonacademic Emphasis).

Pace's College and University Environment Scales (1963, 1967) contain five dimensions: Scholarship, Community, Awareness, Propriety, and Practicality. Some portion of each of these five scales also would appear to be present in many of the eight QSCC scales.

The similarities between the QSCC perceptual factors and those derived from other studies should not be particularly surprising since, in each case, the same general environments, namely four-year colleges and universities, have been analyzed. But the QSCC, an instrument designed especially for prospective college students, also appears to reflect current differences among colleges that such students would find useful. The QSCC Activism factor, for instance, identifies a fairly recent emphasis among numerous colleges in the nation. Moreover, many of the individual items elicit additional information that the college applicant may find helpful (almost one-third of the items were not part of the eight factors).

In the second part of this report, student perception and student self-report data from the QSCC were combined with published, objective information about each institution in order to further investigate differences among college environments. A total of 53 college variables were factor analyzed. Six factors seemed to best summarize the dimensions along which colleges differ: Athletic vs. Cultural, Size with Cliquishness, Elitism, Activism with Flexibility, Student Satisfaction, and Social Life.

The first four of these dimensions were also identified in a multimethod factor analysis, a technique which removes method variance by focusing on correlations between, rather than within, methods of measurement. These four dimensions, then, would appear to be fairly valid descriptions of how four-year institutions differ from each other, rather than the result of differences related to methods of assessment. The three methods of assessment--

student perceptions, student self-reports, and published objective institutional data--were also compared by multimethod factor analysis. After classifying variables by expected overlap, the relationships between variables measured by more than one of the methods were examined by multimethod factor analysis. While in a majority of instances a predicted relationship was found, there were enough exceptions to question the indiscriminate use of the three methods as sources of the same information about colleges. To the extent that the classification scheme was reasonable in categorizing variables that measure approximately the same domain, each method seems to tap some information not predictably obtained by other methods. Quite likely, then, there are certain kinds of information that can be obtained by only one method, even when it appears that two or more methods assess the same domain.

Several of the appendices in this report include additional analyses of items in the QSCC. There is no need to summarize that information here, except to note that it should be useful in further revisions of the QSCC. Probably more important than the specific items retained or added to an instrument like the QSCC is the issue of how information about colleges is presented to prospective students. There is no reason to believe that colleges would be objective in selecting items to write their own environmental descriptions. Indeed past experience would indicate that colleges are anything but objective (see Appendix C, for example). Undoubtedly, then, another agency is needed to provide this service, a need already recognized by some commercial agencies. Eventually, to be utopian for a minute, one might envision students interacting with readily accessible computers to obtain information about individual colleges. If, for example, a computer at their high school contained detailed descriptive information about colleges, students simply could ask the computer to provide a specific response to any number of questions the student may have.

Much more information could be made available in this way than with published material. Furthermore, the diversity within each institution as well as the differences between college averages could be more readily presented since publication space would no longer be crucial. This last point is significant since diversity within certain institutions--for example, the large university where subenvironments exist--is an important consideration.[6]

* * *

In conclusion, this report includes analyses that provide a better understanding of the QSCC and, more generally, of the methods used in describing college characteristics. Hopefully a better understanding of American higher education also has been achieved, although the extent to which prospective college students might profit must await further dissemination and research.

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[6]For the purpose of conveying within college diversity, student self-report items could be especially useful. Prospective students could learn, for example, not only the average number of hours per week that students spend studying, but also the percentage of students who spend 11 to 20 hours, or over 40 hours, studying.

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Appendix A

QUESTIONNAIRE ON STUDENT AND COLLEGE CHARACTERISTICS

PART I

Colleges and universities differ from one another in many ways. Below is a list of statements that may be generally true or characteristic of some colleges, but not of others. For each statement, please indicate how true or not true you feel the statement is when applied to your institution. On the answer sheet, blacken the box with the number indicating one of the following four responses as applied to each statement.

1 Definitely true at this institution
2 Generally true at this institution
3 Generally not true at this institution
4 Definitely not true at this institution

1. Students are encouraged to select a major upon admission or during the freshman year.
2. Tutorials and/or extensive independent study are important features of the undergraduate curriculum.
3. Many required freshman courses repeat material covered in high school.
4. Students are given the opportunity to try out a variety of course areas before deciding on a major.
5. Freshmen and sophomores are given considerable freedom in choosing their courses.
6. Many of the students are more concerned about their social lives - dating, parties, etc. - than they are about their academic lives.
7. Course offerings are designed to accommodate a wide range of educational-vocational career plans.
8. Very few students are placed on academic probation.
9. Juniors and seniors are given considerable freedom in choosing their courses.
10. There are courses or programs available to students with educational deficiencies (remedial English and mathematics, how-to-study, etc.).
11. There are courses or programs available for academically gifted students (honors program, independent study, etc.).
12. Most faculty members seem genuinely interested in teaching.
13. High-ranking faculty members rarely teach freshman and sophomore courses.
14. Faculty members tend to be aloof and somewhat formal with students.
15. Students with personal problems have easy access to a counseling service.
16. Students associate with one another without regard to racial, ethnic, or social backgrounds.
17. Part of the value of going to school here is that you meet many students from all over the country.
18. Controversial student organizations are not allowed to establish chapters on this campus.
19. There are many administrative restrictions aimed at regulating conduct between the sexes.
20. Personal grooming is considered to be a matter of individual taste and concern.
21. The college authorities show displeasure with unusual student appearances, e.g., beards, long hair, etc.
22. Every year a considerable number of students here are suspended or expelled for disciplinary reasons.
23. Protest demonstrations are popular with the students on this campus as a way of expressing their opinions.
24. Students have the opportunity to formally rate or react to many of their instructors or their courses.
25. There are many rules governing student behavior.

1 Definitely true at this institution
2 Generally true at this institution
3 Generally not true at this institution
4 Definitely not true at this institution

26. Students participate in the formulation of nonacademic regulations that affect them.

27. The college believes it has an obligation to parents to look after the well-being of students.

28. Nationally controversial student organizations are active on campus.

29. Student groups often sponsor controversial speakers.

30. The student newspaper is essentially free from control by the administration.

31. Rules governing drinking and smoking are strictly enforced.

32. There are strict regulations governing student dress.

33. Student representatives serve on several college committees with faculty members or administrators.

34. Rules governing residence hall hours are strictly enforced.

35. On the average weekend, over a third of the resident students leave the campus.

36. Social life centers in fraternities, sororities, or similar groups. (Mark #4 if none on campus.)

37. Some fraternities, sororities, or similar groups do not select members from certain minority groups. (Mark #4 if none on campus.)

38. Upperclassmen seldom socialize with freshmen.

39. The surrounding community is cordial to students.

40. The range of books available in the campus bookstore includes much more than assigned texts and suggested readings.

41. Many students attend foreign or art films.

42. The institution annually sponsors a rich cultural program that includes lectures, concerts, plays, and art exhibits.

43. Nationally known scholars are frequently invited to address students and faculty.

44. There is a student dramatic group which gives performances of high quality.

45. The library has excellent resources for undergraduate assignments.

46. In general, religion plays an important role on campus.

Respond to any of the following only if you have taken several courses in the specified area; otherwise leave blank.

47. There are excellent laboratory facilities for undergraduates studying in the physical sciences.

48. There are excellent laboratory facilities for undergraduates studying in the biological sciences.

49. There are excellent studio facilities here for undergraduates studying art.

50. There are excellent studio facilities here for undergraduates studying music.

PART II

For each of the following statements, please indicate the extent of your agreement or disagreement.

1 Strongly agree
2 Agree
3 Disagree
4 Strongly disagree

1. Capable students are encouraged to participate in, or to conduct, their own research projects.
2. My professors have set standards that are difficult to achieve.
3. Students are encouraged to think for themselves.
4. Many students use personality, personal connections, "apple-polishing", or bluff to get through courses.
5. My instructors have not challenged me.
6. Competition for grades among students is very keen.
7. I had already decided on a major when I entered as a freshman.
8. Many teachers allow students to slip by with less than their best efforts.
9. Most of my professors seem interested in me as an individual.
10. There is not much contact between professors and undergraduates outside the classroom.
11. I am satisfied with the opportunities I have had in the past year to meet with my instructors to discuss course work and my progress.
12. My faculty advisor has been very helpful in the planning of my academic program.
13. There is great diversity in the racial and ethnic backgrounds of the student body.
14. The institution exercises too much authority over student life outside the classroom.
15. Rules and regulations governing student behavior on this campus are sensible.
16. Most students are not particularly interested in what the student government does on this campus.
17. There are adequate opportunities here to socialize with the opposite sex.
18. Most of the undergraduates on this campus <u>avoid</u> anything controversial.
19. The student newspaper comments regularly on ideas and issues of national importance.
20. Many students at this college show great concern about political, economic, and social issues.
21. A person who advocates unpopular actions or ideas, no matter how extreme, would be permitted to speak on this campus.
22. A visitor to this campus would notice political activity among students and faculty members.
23. There are no good bookstores on or near the campus.
24. The prevailing attitude here is one of "playing it cool" rather than deeply committing oneself to an issue.
25. A high degree of academic honesty is characteristic of students at this college.
26. Most students seem to have a good deal of money to spend on social activities.
27. Getting to stores, movies, coffee houses, etc., is inconvenient.

PART III

Part III of the questionnaire concerns your involvement with various activities. You are to consider activities in which you have either actively engaged (such as performing with a theater group or working for a civil rights organization) or those which you have attended (such as theater productions or lectures on civil rights).

In the space provided on the answer sheet for each activity, mark the number indicating the extent of your involvement or participation as follows:

1 Deeply involved or have participated very actively
2 Moderately involved or have participated to some extent
3 Not involved or have not participated
4 No opportunity to participate in this activity at this institution
5 The activity does not exist at this institution.

1. Religious associations or activities sponsored by churches, synogogues, religious foundations, etc.
2. Campus publications (newspaper, yearbook, periodicals)
3. Community service or social welfare (anti-poverty activities, tutoring, etc.)
4. Civil rights activities
5. A fraternity, sorority, or similar group
6. Political activities; work for political parties at the national, state, or local level; Young Republicans, Young Democrats
7. Student activist organizations (Students For A Democratic Society, Young Americans For Freedom, CORE, etc.)
8. Activities focusing on international problems and understanding; ways of promoting peace
9. Academic or career interest organizations (language clubs, engineering societies, pre-law groups, future teacher organizations, etc.)
10. Pep rallies, homecoming activities, and other school spirit activities
11. Campus issues and student government
12. Dating and social life
13. Art: out-of-class painting, sculpture, crafts or design, etc.; lectures and exhibits
14. Science: out-of-class lectures and exhibits
15. Instrumental music: symphony concerts, chamber music, band, recitals, etc.
16. Vocal music: singing groups, glee club, choir, etc.
17. Plays or dramatic productions
18. Poetry or drama readings
19. Speech and debate
20. Foreign or art film presentations, film making
21. Folk, ballet, or modern dance
22. Intercollegiate athletic events
23. Intramural athletics
24. "Individual" competitive sports: tennis, golf, squash, badminton, handball, etc.
25. Recreational-outing activities: skiing, sailing, camping, hiking, aquatic sports, etc.

PART IV

For each of the following, mark the number of the appropriate response on the answer sheet.

1. Class in college:

1 Freshman
2 Sophomore
3 Junior
4 Senior
5 Graduate
6 Other (e.g., special or temporary student, etc.)

2. Sex:

1 Male
2 Female

3. Where do you live this term?

1 College residence hall or college apartment
2 Fraternity or sorority house
3 Cooperative
4 Boarding house
5 At home with parents
6 With relatives or family friends
7 Private room off campus
8 Private apartment off campus
9 Other

4. What is your race?

1 Caucasian (white)
2 Negro
3 Oriental
4 Other

5. What is your religious preference?

1 Protestant
2 Catholic
3 Jewish
4 Other religion
5 No formal religion

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

6. What is, or probably will be, your major field of undergraduate study?

1 Biological sciences
2 Physical sciences or mathematics
3 Social sciences (political science, sociology, history, economics, psychology, etc.)
4 Humanities or fine arts (language, literature, philosophy, religion, etc.)
5 Education (Mark only if education rather than a subject field is to be your major.)
6 Business
7 Engineering
8 Other profession or vocation (nursing, forestry, home economics, agriculture, etc.)
9 Do not know

7. From what kind of secondary school were you graduated?

1 Public
2 Private, nonreligious, nonmilitary
3 Protestant denominational
4 Catholic
5 Jewish
6 Private, military (not a school for military dependents)
7 Have an equivalency diploma or did not graduate
8 Other

8. Where is your permanent home address? (Indicate either No. 1 or one of the other six response numbers.)

1 The state in which this college is located, or
2 Northeast (Conn., Mass., Me., N.H., N.J., N.Y., Pa., R.I., Vt.)
3 Southeast (Del., D.C., Fla., Ga., Md., N.C., S.C., Va., W.Va.)
4 South Central (Ala., Ark., Ky., La., Miss., Okla., Tenn., Tex.)
5 North Central (Ill., Ind., Iowa, Kans., Mich., Minn., Mo., Neb., N.Dak., Ohio, S.Dak., Wis.)
6 Pacific and Mountain (Ariz., Calif., Colo., Idaho, Mont., N.Mex., Nev., Ore., Utah, Wash., Wyo.)
7 Outside the continental U.S. (including Alaska and Hawaii)

9. Which of the following best describes the community that you consider your home town?

1 A city (not a suburb) of more than 500,000
2 A city of 50,000 to 500,000
3 A suburb of a metropolitan area
4 A city or town of 10,000 to 50,000
5 A town of less than 10,000
6 A farm, ranch, or other open country location

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

10. Which of the following best describes your father's main occupation? If he is retired, deceased, or unemployed, indicate his former main occupation.

1 Unskilled worker, laborer, farm worker
2 Semiskilled worker, machine operator
3 Service worker (policeman, fireman, military noncommissioned officer, etc.)
4 Skilled worker or craftsman (carpenter, electrician, plumber, etc.)
5 Salesman, bookkeeper, secretary, office worker, etc.
6 Owner, manager, partner of a small business or farm; lower-level governmental official; military commissioned officer
7 Profession typically requiring a bachelor's or master's degree (engineer, elementary or secondary school teacher, etc.)
8 Owner or high-level executive of large business, high-level government agency, large agricultural enterprise, etc.
9 Profession typically requiring an advanced degree (doctor, lawyer, college professor, etc.)

11. What is your best estimate of the total income of your parents last year? (If married, report only the combined income of you and your spouse.) Consider annual income from all sources before taxes.

1 Less than $4,000
2 $4,000 to $5,999
3 $6,000 to $7,999
4 $8,000 to $9,999
5 $10,000 to $13,999
6 $14,000 to $19,999
7 $20,000 to $25,999
8 $26,000 to $31,999
9 Over $32,000

12. How much formal education does (did) your father have? Indicate only the highest level (i.e., mark only one of the nine alternatives).

1 No formal schooling or some grade school only
2 Finished grade school
3 Some high (secondary) school
4 Finished high school
5 Business or trade school
6 Some college
7 Finished college (four years)
8 Attended graduate or professional school (e.g., law or medical school) but did not attain a graduate or professional degree
9 Attained a graduate or professional degree (e.g., M.A., Ph.D., M.D.)

13. Indicate the extent of your mother's formal education. Use the alternatives in the preceding question. (Mark only one.)

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

For the next <u>three</u> questions, your responses should represent percentages that total about 100%.

14. About what percentage of your college expenses has come from your parents, husband, or wife?

1 None
2 1-25%
3 26-50%
4 51-75%
5 76-100%

15. About what percentage of your college expenses has come from personal earnings, personal loans, savings, or the G. I. Bill?

1 None
2 1-25%
3 26-50%
4 51-75%
5 76-100%

16. About what percentage of your college expenses has come from scholarships? (College, public, or private agency)

1 None
2 1-25%
3 26-50%
4 51-75%
5 76-100%

17. After obtaining your bachelor's degree, do you expect to continue your education in a graduate or professional school?

1 Definitely yes
2 Probably yes
3 Probably not (Omit Question 18)
4 Definitely not (Omit Question 18)
5 I have not given sufficient thought to this matter to say. (Omit Question 18)

18. If you are planning to go on to a graduate or professional school after receiving your bachelor's degree, in which of the following do you think that you will specialize? (Leave blank if undecided or if your choice is not listed.)

1 Business
2 Education
3 Engineering
4 Humanities
5 Law
6 Medicine
7 Biological sciences
8 Physical sciences or mathematics
9 Social sciences
10 Speech, drama, music, art, architecture, or a performing arts school

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

19. In thinking about your occupational future, which one of the following do you think you prefer at this time?

1 Elementary or secondary school work (teaching, administration, counseling, etc.)
2 College work (teaching, administration, scholarly activity, etc.)
3 Business (management, marketing, accounting, etc.)
4 A profession (doctor, lawyer, engineer, etc.)
5 A trained technician or craftsman (electrician, data processor, mechanic, etc.)
6 A life centering upon some aspect of the creative arts (artist, musician, journalist, etc.)
7 A life centering upon a home and family
8 Other
9 I have not given sufficient thought to this matter to say.

20. On the average, how many hours per week are you working part-time or full-time this term? (Exclude vacations.)

1 None
2 1-5 hours
3 6-10 hours
4 11-20 hours
5 21-30 hours
6 Over 30 hours

21. How much per week do your expenses for social life and incidentals average?

1 $5 or less
2 $6 - $10
3 $11 - $15
4 $16 - $25
5 Over $25

22. How many hours a week on the average do you spend studying? (Only full-time students respond.)

1 Less than 10 hours
2 11-20 hours
3 21-30 hours
4 31-40 hours
5 Over 40 hours

23. How frequently during the past academic year have you dated at college? (Count only prearranged dates.)

1 Not at all
2 Less than once a month
3 About once a month
4 About twice a month
5 About once a week
6 About twice a week
7 More than twice a week
8 Not applicable (e.g., married)

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

24. How do you feel about the proportion of men and women students at this college? (Or, if your college is all men or all women, how do you feel about the absence of the opposite sex?)

1 Very dissatisfied (i.e., there are not enough, or there are too many of the opposite sex.)
2 Somewhat dissatisfied
3 Fairly satisfied
4 Very satisfied (i.e., the ratio of boys to girls on this campus is just right, or the absence of the opposite sex here suits me fine.)

25. With regard to your religious beliefs, which of the following statements best indicates your position since coming to college?

1 I have retained the religious beliefs I held at entrance.
2 I have changed my religious affiliation.
3 I have rejected formal religion.
4 My religious beliefs have been strengthened.
5 My religious beliefs have been weakened.
6 Since I held no particular religious beliefs, none have been influenced.
7. None of the above

26. If you were advising a high school senior with interests similar to your own regarding his coming to this institution, what would be the general nature of your advice?

1 I would heartily recommend his coming here.
2 I would recommend it to him with reservations.
3 I would discourage him from coming here.
4 I would strongly advise him not to come here.

27, 28 and 29.

Which three of the following topics are among those you and your friends frequently discuss during dinner, at bull-sessions, etc.?

Mark one of the following in Column 27, another in Column 28, and a third in Column 29.

1 Sports
2 Campus issues
3 A topic or idea brought up in class
4 Dating and social life
5 National and international events, politics
6 Social problems: poverty, civil rights, etc.
7 Art, theater, classical music
8 Literature, novels, poetry
9 Science: theories, events, etc.
10 Philosophy and religion

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

30 and 31.

College students have different ideas about the purpose of a college education, some of which are listed below. As you read this list, consider what goals are important to you. Mark in Column 30 the number of the goal that is most important to you, and in Column 31 the number of the goal that is second most important to you.

1 To broaden my intellectual interests and to acquire an appreciation of ideas
2 To increase my appreciation of art, music and literature
3 To decide upon an occupation or career and develop the necessary skills
4 To increase my effectiveness in working with people and in getting along with different kinds of people
5 To develop my knowledge and interest in community and world problems
6 To help clarify my moral and ethical values
7 To acquire knowledge and attitudes basic to marriage and a satisfying family life
8 To acquire background for further study in some professional or scholarly field

32. Using the above list of goals, mark the number representing your least important goal in college.

33. Regarding the two goals you have chosen as most important in Questions 30 and 31, how satisfied are you with the help the college is giving you in progressing toward these goals?

1 Dissatisfied
2 Somewhat dissatisfied
3 Fairly satisfied
4 Very satisfied
5 Generally satisfied with one; dissatisfied with the other

PART V

Are there any comments or further descriptions of your institution (favorable or unfavorable) that you would like to offer? Can you think of a brief statement that captures the uniqueness or flavor of your college or university? Please use the space provided on the back of the answer sheet for your written comment.

OMIT ANY QUESTION WHICH YOU CONSIDER UNDULY PERSONAL OR OBJECTIONABLE.

Appendix B

Means, Standard Deviations, Average Within Institution Standard Deviations, and Estimated Omega Squared Values for Each Item in Parts I and II of the QSCC

	Mean[a]	Standard Deviation of the Means[b]	Average Within Institution Standard Deviation[c]	Estimated Omega Squared[d]
		(N=216 institutions)		(N=116 inst. and about 22,000 students)
Part I				
Question 1	2.30	.61	.83	.36
2	2.70	.38	.81	.13
3	2.48	.31	.80	.10
4	2.25	.54	.85	.26
5	2.77	.56	.85	.25
6	2.44	.30	.74	.10
7	2.26	.33	.80	.12
8	2.47	.41	.73	.24
9	2.07	.43	.80	.18
10	2.76	.65	.86	.31
11	1.98	.61	.79	.30
12	1.76	.27	.63	.14
13	3.04	.31	.80	.12
14	3.02	.26	.78	.10
15	2.01	.36	.88	.13
16	1.90	.30	.75	.12
17	2.41	.54	.81	.30
18	2.51	.53	.89	.22
19	2.37	.52	.90	.20
20	1.94	.43	.77	.22
21	2.58	.57	.86	.26
22	3.16	.31	.71	.12
23	3.33	.43	.72	.24
24	2.42	.53	.87	.24
25	2.16	.59	.78	.27
26	2.04	.35	.77	.19
27	1.82	.45	.73	.21
28	3.28	.51	.71	.30
29	2.69	.47	.81	.20
30	2.20	.46	.87	.18
31	2.35	.67	.84	.31
32	2.91	.67	.74	.40
33	1.83	.32	.77	.17
34	1.76	.67	.73	.38
35	2.19	.62	.82	.31
36	2.91	1.04	.56	.75
37	3.17	.84	.60	.61
38	3.08	.30	.86	.10
39	2.08	.42	.75	.21
40	2.46	.55	.85	.25
41	2.65	.45	.72	.25
42	1.80	.39	.74	.23
43	2.31	.36	.81	.14
44	1.84	.49	.71	.31
45	2.20	.48	.83	.19
46	2.55	.74	.76	.42
47	2.06	.49	.78	.25
48	2.02	.53	.75	.32
49	2.55	.69	.82	.40
50	2.42	.74	.82	.45

Appendix B (Continued)

	Mean[a]	Standard Deviation of the Means[b] (N=216 institutions)	Averaged Within Institution Standard Deviation[c]	Estimated Omega Squared[d] (N=116 inst. and about 22,000 students)
Part II				
Question 1	2.10	.31	.73	.12
2	2.68	.14	.67	.03
3	1.96	.27	.76	.09
4	2.43	.37	.81	.14
5	3.00	.21	.73	.06
6	2.25	.33	.78	.09
7	2.23	.39	1.10	.10
8	2.31	.21	.77	.06
9	2.19	.32	.80	.13
10	2.70	.40	.84	.17
11	2.12	.28	.81	.10
12	2.55	.35	.98	.11
13	2.80	.43	.82	.20
14	2.57	.52	.84	.21
15	2.24	.36	.76	.13
16	2.22	.34	.75	.16
17	2.51	.49	.84	.22
18	2.39	.27	.80	.07
19	2.67	.40	.79	.17
20	2.37	.26	.77	.08
21	2.56	.48	.80	.20
22	2.86	.32	.70	.14
23	2.72	.39	.86	.16
24	2.30	.26	.75	.10
25	2.19	.46	.70	.31
26	2.35	.37	.66	.21
27	2.55	.47	.86	.19

[a]Mean of the mean responses at 216 institutions.

[b]Standard deviation for the 216 institutional means; thus 68% of the institutions had average scores between plus or minus one standard deviation of the overall mean.

[c]The average within college standard deviation was computed by summing the standard deviations for each institution and dividing by 216.

[d]Estimated omega squared indicates the proportion of total variance accounted for by the variance between colleges (Hays, 1965). It is very similar to the intraclass correlation and is computed as follows:

$$\text{est. omega squared} = \frac{\text{SS between} - (J-1)\ \text{MS within}}{\text{SS total} + \text{MS within}}$$

where J = number of groups (institutions in this instance)

Estimated omega squared values for the 77 items range from .03 to .75, with most between .10 and .25. Thus, for the second item in Part II, only three percent of the total variance is accounted for by variations between colleges.

Appendix C

Use of Information from the QSCC in the 1969 College Handbook

The 1969 College Handbook (CEEB, 1969) includes a "College Life" section that enables each institution to depict selected characteristics of its students and its campus activities. Of 214 institutions that have administered the QSCC, their use of the data in the Handbook varied as follows:

(1) Very limited use, i.e., one to three sentences (e.g., Hampden-Sydney College in Virginia).

(2) Moderate use, a short paragraph, perhaps of four to eight sentences (see Arkansas College as an example).

(3) Fairly extensive use, varying from a long paragraph to most of the College Life section (e.g., Columbia College, South Carolina).

The following table gives the number and percentage of colleges in each of the above three categories as well as those who did not use the questionnaire data.

Extent to Which QSCC Responses
Were Used in the College Life Section of
the College Handbook
Number and Percentages (in parentheses)

	Group 1		Group 2			
Extent	116 colleges that had a "good" student response to QSCC[a]		98 colleges that had a "mediocre" student response to QSCC[b]		Totals	
Did not use	52	(45)	62	(63)	114	(53)
Very limited (one to three sentences)	11	(9)	8	(8)	19	(9)
Moderate (a short paragraph)	18	(16)	9	(9)	27	(13)
Extensive use (varying from a long paragraph to most of the College Life section)	35	(30)	19	(19)	54	(25)
					214	

[a]Colleges for which two-thirds or more of their random samples of students (or total populations) responded. The average response was between 75-80%.

[b]Colleges with fairly large but unrepresentative samples--either because of a poor response rate or poor sampling.

Of the 214 institutions, 114 or 53% did not use the data at all; about one-fourth used the data extensively. Note, however, that colleges that had gotten a "good" student reponse to QSCC were more likely to draw on the data for their College Life section: 64 of the 116 colleges in that group used the data, with 35 of these using it extensively. In view of the questionable response rate to QSCC among the 98 colleges in Group 2, it is probably just as well that the data were not as extensively drawn on by those colleges.

Appendix D

Comparison of Responses to the QSCC by the Same Students at Two Different Times of the Year

The QSCC was administered to the same group of students at each of two colleges during Fall 1968 and Spring 1969. St. Michael's in Winooski, Vermont, a Catholic men's college, and Lynchburg College (Virginia, Coed) were the two institutions that participated in this study. The major purpose of the retest was to investigate the stability of responses and hence the stability of the college or student characteristics in question. The five- to six-month time interval was expected to result in some variation in responses to items relating to the college environment since conditions (or students' perceptions of conditions) at the colleges may have changed. Those items which were most unstable at both institutions, however, might be deleted or revised in later editions of the QSCC. For the more factual items (e.g., "What is your race?"), little or no difference in responses from one time to the next was expected.

The following table lists the percentage of students at each college who responded identically, similarly, or differently to the QSCC. In Part I, for example, 46 percent of the St. Michael's group and 63 percent of the sample at Lynchburg responded differently to the item: "Controversial student organizations are not allowed to establish chapters on this campus." In Part IV, Questions 27, 28, and 29, which ask students to indicate the three topics they most frequently discuss during dinner or bull sessions, were responded to differently by large percentages of students at each college. The factual items in Part IV were generally responded to consistently.

Appendix D

Comparison of Responses to the QSCC by the Same Students at Two Different Times of the Year;

	Percentage Responding[a]					
	Identically[b]		Similarly[c]		Differently[d]	
Part I	St. Michael's	Lynchburg	St. Michael's	Lynchburg	St. Michael's	Lynchburg
1	51	48	31	21	18	30
2	49	51	26	16	26	33
3	54	47	8	20	38	32
4	36	52	38	22	26	25
5	69	46	21	24	10	30
6	51	48	23	16	26	36
7	54	57	18	18	28	25
8	36	39	31	24	33	36
9	67	55	18	22	15	23
10	36	45	31	28	33	27
11	56	49	15	38	28	13
12	62	61	23	27	15	12
13	46	51	13	20	41	28
14	56	59	21	18	23	23
15	46	49	33	29	21	22
16	69	60	18	28	13	12
17	46	52	26	22	28	26
18	49	26	5	10	46	63
19	38	40	31	23	31	37
20	56	52	33	27	10	21
21	49	43	8	26	44	30
22	51	54	26	20	23	25
23	56	54	38	34	5	12
24	67	54	18	17	15	28
25	62	53	15	25	23	22
26	46	54	23	13	31	33
27	54	59	28	26	18	15
28	77	36	23	24	0	40
29	59	43	21	15	21	41
30	51	40	21	29	28	29
31	56	43	10	28	33	27
32	56	30	31	28	13	41
33	33	43	21	25	46	32
34	31	64	26	21	44	14
35	46	46	26	18	28	35
36	85	45	5	18	10	36
37	82	53	13	16	5	29
38	38	65	15	22	46	12
39	51	45	23	28	26	27
40	59	43	21	32	21	25
41	56	43	23	23	21	32
42	44	47	23	34	33	20
43	49	47	31	18	21	35
44	67	71	18	21	15	9
45	41	50	26	21	33	29
46	49	51	28	23	23	26
47	77	64	3	5	21	30
48	77	65	3	7	21	29
49	75	75	3	2	23	23
50	72	72	5	2	23	26

Appendix D (cont'd)

Percentage Responding[a]

Part II	Identically[b] St. Michael's	Identically[b] Lynchburg	Similarly[c] St. Michael's	Similarly[c] Lynchburg	Differently[d] St. Michael's	Differently[d] Lynchburg
1	46	52	8	18	46	29
2	69	53	10	17	21	29
3	69	66	10	16	21	17
4	54	61	10	15	36	24
5	67	55	5	23	28	22
6	54	63	18	14	28	23
7	51	53	26	18	23	28
8	51	51	15	23	33	26
9	49	41	13	23	38	36
10	41	53	18	12	41	35
11	44	45	8	21	49	35
12	56	42	23	29	21	28
13	56	50	21	16	23	34
14	38	45	36	25	26	30
15	56	46	18	22	26	33
16	54	54	13	16	33	29
17	46	51	15	18	38	30
18	41	45	15	20	44	36
19	46	38	26	12	28	50
20	46	58	10	15	44	27
21	56	53	10	15	33	32
22	59	55	26	15	15	29
23	54	53	23	22	23	25
24	56	58	15	14	28	28
25	56	63	15	15	28	22
26	69	57	8	10	23	34
27	56	51	28	17	15	32

Appendix D (cont'd)

Percentage Responding[a]

Part IV	Identically[b] St. Michael's	Identically[b] Lynchburg	Differently[d] St. Michael's	Differently[d] Lynchburg
1	100	95	0	5
2	100	99	0	1
3	95	93	5	7
4	100	100	0	0
5	100	90	0	10
6	100	92	0	8
7	95	96	5	4
8	97	83	3	17
9	72	73	28	27
10	85	64	15	33
11	67	48	26	46
12	92	70	8	27
13	79	75	21	23
14	62	62	38	37
15	59	45	41	54
16	79	74	21	25
17	64	58	36	42
18	56	46	31	36
19	56	67	44	33
20	77	74	23	26
21	64	66	36	34
22	59	52	41	48
23	28	45	72	54
24	64	54	36	45
25	46	49	54	50
26	69	63	31	36
27	56	41	44	59
28	44	25	56	75
29	33	20	67	80
30	46	60	54	40
31	26	42	74	58
32	44	51	56	48
33	69	59	31	41

[a]Percentages do not always add to 100 because of omits at either administration time.

[b]Exactly the same response at both times; e.g., the "definitely true" response in the Fall and in the Spring.

[c]Similar but not the same; e.g., "definitely true" the first time and "generally true" the second time.

[d]An opposite response; i.e., "definitely true" or "generally true" the first time and "generally not true" or "definitely not true" the second time.

Appendix E

College Perception Factor Correlations with Student Self-Report Data and Institutional Data of Record (N=103 to 116 institutions)[a]

	Restric-tiveness	Faculty-Student Interaction	Activism	Non-academic	Curriculum Flexibility	Challenge	Lab Facilities	Cultural Facilities
Student Self-Report Data								
Family socioeconomic status	-13	62	22	-54	45	37	05	28
Hours studying	-17	57	23	-56	37	66	23	14
Number of dates	10	07	-07	04	14	-18	-01	17
Student recomm. of the college	-42	27	32	-03	32	35	14	37
Stud. satis. with the college	-23	67	30	-41	40	73	34	47
Published Objective Institutional Data								
Total enrollment ($\log_e$)	-21	-68	28	60	00	-24	11	03
Faculty per students	-13	28	-02	-42	04	37	05	-02
Proportion of men	-15	-32	04	58	02	-29	-01	-57
Religiously affiliated	32	24	-17	15	-01	-06	02	11
SAT-Verbal	-29	40	19	-55	30	55	17	-04
SAT-Mathematics	-28	26	10	-30	26	45	20	-26
% living in residence halls	01	42	14	-35	25	16	13	06
Fraternities or sororities exist	-13	-50	01	83	01	-42	12	-15
Percentage to grad/prof schools	-17	13	02	-03	16	00	05	-35
Books per student	-25	42	29	-36	31	33	06	06
College income per student	-15	37	05	-36	20	41	07	-24

[a] r of .24 required for significance at the .01 level.